



# COVID-19

## HOW TO STOP HUNGER FROM BECOMING MORE DEADLY THAN THE VIRUS

**Even before COVID-19 hit, a population more than twice the size of the United States regularly went to bed hungry. 135 million were experiencing hunger so severe that it threatened their lives and livelihoods.<sup>i</sup> With COVID-19, this number could double by the end of 2020.<sup>ii</sup>**

**For many, the COVID-19 lockdown has meant more interest in food. Google searches for banana bread recipes are up 800% in the US.<sup>iii</sup> YouTube Chefs are becoming super stars.<sup>iv</sup> For others, the devastating effects of a collapsing economy, job losses, and lost incomes are hitting hard; without a safety net, hunger could be fatal.**

**There is hope: unlike previous food crises, food is well supplied. But as COVID-19 hits the economies of poorer countries, food access will become an issue, with millions of people's main source of income – physical labour – restricted by social distancing measures. Remittances from family members abroad will fall.**

**In addition, exchange rate fluctuations may mean food importers face higher bills and food imports could fall by a quarter in sub-Saharan Africa this year.<sup>v</sup> <sup>vi</sup> Individuals and whole countries are hoarding. Farmers are unable to grow crops and sell their produce due to containment measures. All of this adds up to a situation where an additional 419 million people could be pushed to live under US\$1.90 a day.<sup>vii</sup>**

**But if governments and businesses take action now, they can prevent the COVID-19 pandemic from spilling over into a hunger epidemic. They must:**

- Expand and improve food assistance and social protection programs to protect the most vulnerable.**
- Reduce international remittance costs to close to 0%.**
- Create 500bn Special Drawing Rights and implement an immediate debt moratorium for 2020 and 2021.**
- Fully fund the UN's Global Humanitarian Response Plan (US\$6.7 bn)**
- Step up efforts to ensure adequate food reserves including by fully funding the Global Agriculture and Food Security Programme (US\$1.5 bn).**
- Create 'grain corridors' to enable the free flow of food supplies.**
- Resist protectionist measures in exporting and importing food.**
- Monitor and act to stabilise food prices.**

“Rich people can stay home because they have a store well stocked with food...for a survivor on the street your store is your stomach.”

**-Timothy, a teenager living on the streets of Mombasa, Kenya.**



## Key Facts

- **For every ten people on the globe, one person went hungry last year.**
- **In sub-Saharan Africa, 1 in every 5 people is undernourished.**
- **COVID-19 could double the number of people living with acute hunger by the end of 2020.**
- **In Ethiopia and Nigeria, nearly 60% of consumption expenditure is spent on food.**
- **More than 85% of Senegalese have reported income loss, and over a third are eating less food.**
- **Remittances to low-and-middle-income countries are expected to fall by 20% in 2020, more than double international aid to Africa.**
- **With trade blockages, agricultural production could shrink by up to 7% in sub-Saharan Africa and food imports could fall by 25% in 2020.**
- **Sub-Saharan Africa imports more than 40 million tons of cereal.**
- **Export restrictions and import increases in 2007/08 increased prices for rice by 45% and wheat by 30%.**
- **Food protests have been reported across the world, including Lebanon, Chile, Colombia, Nigeria, Ukraine, Algeria, Kenya, Ethiopia and South Africa. The 2007/08 food price crisis sparked riots in 48 countries.**



## WHAT DOES A VIRUS HAVE TO DO WITH HUNGER?

**History has shown time and again the powerful impact of pandemics on hunger. COVID-19 is no different. For the most vulnerable, as incomes decline, shrinking access to food will have devastating consequences.**

**In Nigeria and Ethiopia, nearly 60% of consumption expenditure is spent on food.<sup>viii</sup> Basic arithmetic tells us that even modest price increases can push the cost of the week's food basket to over 100% of incomes. That means people eat less and turn to cheaper, less nutritious food, resulting in increased malnutrition and threatening maternal and child health.<sup>ix</sup> This adds further pressure to already stretched health systems.**

**Ironically, food is not in short supply: in Europe and the US, milk is being dumped and eggs are being smashed as demand from restaurants decreases.<sup>xi</sup> But access to food poses a problem. Food security concerns go hand in hand with pandemics.<sup>xii</sup> The SARS and MERS outbreaks led to food price hikes and market panics in affected areas, leaving the poorest groups without access to essential foods, especially staples.<sup>xiii</sup>**

**The Ebola outbreak in West Africa between 2014-16 started as a health crisis and turned into a livelihood and food security crisis, affecting almost the entire population of the region and pushing 750,000 people into food insecurity.<sup>xiv</sup> Land borders of Guinea, Liberia, and Sierra Leone were closed, flights were suspended, and the movement of goods and people was restricted, and labor shortages were common.<sup>xvi</sup>**

**As a result, agricultural market supply chains were disrupted, farmers were unable to cultivate or sell their crops.<sup>xvii</sup> Shortfalls in production and shortages of goods in the market led to price increases. In Sierra Leone, over two-thirds of households said they had to undertake coping strategies to ward off hunger.<sup>xviii</sup>**

## Reduced incomes will have the biggest impact on food access

**The IMF forecasts global economic growth to contract by 3% of gross domestic product (GDP) in 2020, a downgrade of 6.3 percentage points from the January 2020 projection. This will make it the worst downturn since the Great Depression.<sup>xix</sup> Up to 419 million additional people could fall into extreme poverty in 2020, particularly in the sub-Saharan Africa and South Asia.<sup>xx xxi xxii</sup>**

**When faced with an income shock, poorer households are more likely to reduce consumption, while wealthier households can sell other assets and have better credit access.<sup>xxiii</sup> Early studies from the impact of COVID-19 in rural China confirm that in order to ensure adequate food, families substituted high nutrition foods such as meat and produce, for lower nutrition items like grains and staples, significantly impacting nutrition.<sup>xxiv</sup> In Senegal, more than 85% of its population have seen a reduction in income, and as a result, over a third of them now eat less food every day.<sup>xxv</sup>**

**The main productive asset of the poor, physical labour, will be greatly affected by social distancing measures making efforts to contain the virus much more challenging.<sup>xxvi</sup> Vulnerable citizens in Tunisia have disobeyed lockdown measures to protest over hunger.<sup>xxvii</sup> In Zimbabwe, where extreme hunger debilitates 30% of the population, many are willing to risk contracting COVID-19 if it means they can eat.<sup>xxviii xxix xxx</sup>**

**For those children in low-income families whose access to food was already vulnerable, the virus puts them at risk of missing their one meal a day. Over 300 million children receive meals at school, but at it's peak, school closures resulted in 1.6 billion children who are no longer in school due to the pandemic.<sup>xxxi</sup>**



<sup>xxxii</sup> For lower-income families, the value of school meals is equivalent to 10% of their monthly income.<sup>xxxiii</sup> Severe hunger and malnutrition could permanently damage their cognitive development.

As family members lose jobs abroad due to COVID-19, they have less money to send home. Remittances to low and middle-income countries will decline sharply by 20% in 2020 due to COVID-19, more than double the volume of international aid to Africa.<sup>xxxiv</sup> In The Gambia, remittances account for 14% of GDP, and in Nigeria, they are equivalent to the size of Nigeria's federal government budget.<sup>xxxv xxxvi</sup> Fees charged on these remittances are substantial. For instance, in 2017, US\$30 billion was collected in remittance fees.<sup>xxxvii</sup> Because of volatility in foreign exchange markets and operational disruptions, these fees are likely to grow.<sup>xxxviii</sup>

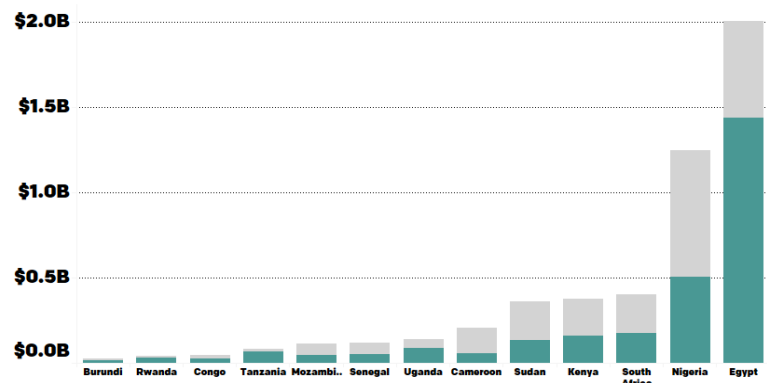
## Protectionist measures and hoarding drive up prices

Currently, global markets are well supplied, there are relatively high food stocks, and the production of key staples is unlikely to be disrupted.<sup>xxxix xl</sup>

But during times of crisis, some families panic and hoard food. In response, countries impose export restrictions in a misguided effort to protect domestic prices.<sup>xli xlii</sup>

G20 members collectively accounted for 81% of global cereal exports in 2017; countries like Australia, Argentina and Canada export half their crop.<sup>xliii</sup> But at the time of writing, 11 countries have introduced binding export restrictions.<sup>xliv</sup> Russia, the largest exporter of wheat, has introduced export quotas.<sup>xlv</sup>

Russia's share of wheat imports, USD billions (2018)



This will substantially impact African countries, particularly the poorest who will find it more difficult to afford food when it becomes more costly. Already rice prices have risen by 7%; for countries like Sudan, nearly 30%.<sup>xlvi</sup> For instance, Egypt imported 72% of its wheat from Russia in 2018 alone.<sup>xlvii</sup>

Measures like this are wrong-headed, especially in an environment with adequate food supply: in 2007/08 when governments restricted food exports, it had little impact on domestic prices<sup>xlviii</sup> but led to more hoarding and further price spikes on international markets. Rice and wheat prices increased by 45% and 30% respectively due to export restrictions and import increases to protect local consumers, plunging 100 million people into food insecurity and sparking riots in 48 countries.<sup>xlix l</sup> When export restrictions are effective, they depress local farmers' income; countries do not benefit from higher prices in international markets; and in the long-run, they can further increase food prices as they distort production incentives for farmers.<sup>li</sup>

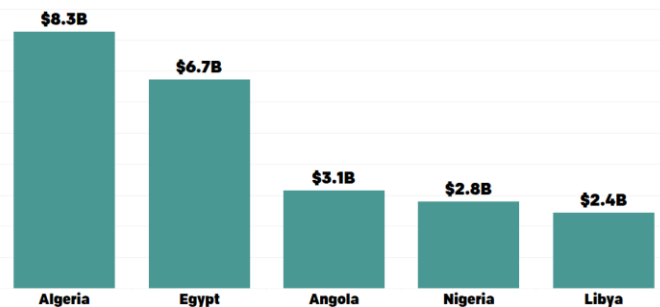
## Exchange rate volatility may increase costs for net food importers

**Imports are a critical source of food, particularly for countries who do not have the resource base to grow food efficiently. Sub-Saharan Africa imports more than 40 million tons of cereal, which include, among others, wheat, maize, and rice, from around the world.<sup>lii liii liv</sup>**

**Commodity exporters, as many African countries are, face a triple whammy. Oil producers are particularly vulnerable, as they face demand shocks that have led to the collapse in oil prices. That leaves governments with less income; these countries have debt in foreign currencies that often exceeds foreign currency reserves so their currency falls against the US dollar; this in turn increases the cost of debt repayments.<sup>lv lvi</sup>**

**In Angola, the oil sector accounts for one-third of GDP and more than 90% of exports, while in Nigeria oil makes up 90% of export earnings and over half of total government revenue.<sup>lvii lviii</sup> Both have experienced their currencies decline against the US dollar since the beginning of 2020: in Nigeria by more than 15% and in Angola by 20%.<sup>lix lx</sup> Angola imports over half of its overall food and Nigeria is the third largest rice importer in the world.<sup>lxi lxii</sup>**

Net import of basic food, 2018



## Agricultural production and supply chains are disrupted

**Sub-Saharan Africa's agricultural production could decline by 7% in 2020 if trade blockages are enacted.<sup>lxiii</sup> Already, we're starting to see the impact: in Nigeria, the proportion of GDP that came from agriculture declined by 18% and in Rwanda by 27%.<sup>lxiv</sup> Recruiting seasonal on-farm and off-farm workers is hard under lockdown, and access to productive inputs such as fertilizers and quality seeds has become a nightmare, especially for farmers in some African countries that are now in their planting season.<sup>lxv</sup> During the 2014 Ebola outbreak, quarantine meant farmers could not grow their crops.<sup>lxvi</sup> In Liberia, 47% of farmers were unable to produce due to disruptions in agricultural market supply chains and labour shortages. Shortages of goods led to increases in prices;<sup>lxvii</sup> rice prices went up by 30%, cassava prices rose by 150%.<sup>lxviii</sup> In Guinea, rice production fell by one-fifth, corn by a quarter, coffee by half and cocoa by a third.<sup>lxix</sup>**

**Getting produce to the market is also a challenge. Regional trade of food in developing countries is largely dominated by informal poor traders, who are mostly women.<sup>lxx</sup> During lockdown, these traders could be prevented from selling and exposed to theft and social unrest, particularly in poorly secured and conflict-prone African countries.<sup>lxxi</sup> This would reduce food accessibility and increase domestic food prices, especially for perishable high value and nutritious foods like meat and vegetables that cannot be easily stored.<sup>lxxii</sup> With the disruptions in distribution channels and regulatory personnel themselves affected by the virus, safety of workers during food production may also become an issue.**

## Limited capacity to respond to food insecurity

**At times of crisis, extending cash transfers to vulnerable people, stabilizing food supply, and using monetary policies to support businesses is the smart thing to do. Rwanda has led the way introducing fixed prices on food and placing a limit on individual purchases of certain food items. Nigeria ordered the release of 70,000 metric tonnes of grains to vulnerable people.<sup>lxxiii lxxiv</sup>**

**But with limited resources, and economic headwinds, many governments' ability to respond effectively will, at best, be limited. While richer countries have committed 10-15% of their annual economic output**



**on stimulus measures, poorer countries can only afford to spend 1-3%.<sup>lxxv</sup> Some African governments, for example, are forced to cut agricultural expenses in order to prioritize health-related expenditures.<sup>lxxvi</sup>**

**In the US, at the time of writing, more than 40 million people have filed for unemployment benefits and in developed countries, 60% of workers who lose their jobs are covered by unemployment insurance. But in poorer countries, 2 billion people are employed in the informal sector and therefore are much more vulnerable to unemployment without benefits.<sup>lxxvii lxxviii lxxix</sup> Only 10% of people who lose their formal jobs are covered by unemployment insurance.<sup>lxxx</sup>**

**Emergency food reserves are also limited. West Africa would have to triple its estimated grain reserves to effectively respond to emergency situations.<sup>lxxxi</sup> Only Burkina Faso, Mali, Niger and Nigeria have significant food reserves in the region, but even this is inadequate. Nigeria's storage capacity is only 5% filled.<sup>lxxxii</sup> In contrast, China's grain storage is large enough to sustain its domestic consumption for almost a year and the US, India, Canada, and Australia, have enough to meet domestic needs for three months.<sup>lxxxiii</sup>**

**Even before COVID-19, food insecurity was on the rise with 135 million people living with acute hunger.<sup>lxxxiv</sup> In Sierra Leone, over 90% of the population and 83% in the Sahel were experiencing moderate and severe food insecurity.<sup>lxxxv</sup> Ongoing conflicts in the Sahel regions; a locust invasion in East Africa; and widespread drought and flood compound these challenges.<sup>lxxxvi</sup> COVID-19 is expected to double the number of people living with acute hunger to over a quarter of a billion people by the end of 2020.<sup>lxxxvii</sup> This will put the governments of these countries in a difficult position.<sup>lxxxviii</sup>**

**The 2014 Ebola crisis taught us that epidemics and pandemics require attention to food security. COVID-19 is certain to be worse than Ebola due to its global nature. Extended lockdowns are affecting both the domestic and imported supply of food throughout the continent.**

## What should governments and businesses do?

- **Governments should expand and improve food assistance and social protection programs to protect the most vulnerable including cash-based transfers as the primary safety net, which can largely be distributed through contactless solutions,<sup>lxxxix</sup> in-kind food assistance such as take-home rations, food package delivery, and food vouchers where necessary.<sup>xc</sup>**
- **Governments and businesses should introduce measures to reduce remittance costs to close to 0% during the crisis.<sup>xcii</sup>**
- **The IMF Board should act to create 500bn in Special Drawing Rights and all actors should immediately enact a debt moratorium for bilateral, multilateral and private debt for 2020 and 2021. Special Drawing Rights should be allocated to poorer countries, providing them with immediate liquidity to respond to the crisis.**
- **Donors should fully fund the US\$6.7 billion requested for the Global Humanitarian Response Plan<sup>xciii</sup> The GHRP is a coordinated global humanitarian response plan to fight COVID-19 in 64 of the world's most vulnerable countries, and includes financing for the WFP and the FAO.**
- **All governments should step up efforts to ensure adequate food reserves by stepping up local production and storage. Donors should fully fund the US\$1.5 billion requested by the Global Agriculture and Food Security Programme (GAFSP). GAFSP, created by the G20 in response to the 2007-2008 food price crisis, is a multilateral mechanism to improve food and nutrition security that has effectively channeled finances to governments, the private sector, and directly to farmers.<sup>xciii xciv xcv</sup>**
- **All governments should create 'grain corridors' to enable the free flow of food supplies. African governments should form a regional trade bloc – as was done in Latin America – to ensure food supply**

**for the continent and should ensure quick processing of food imports and allow farmers, food processors, traders, port staff, seafarers and other maritime workers to work safely during lockdown.<sup>xcvi xcvi</sup> They should temporarily reduce or suspend import tariffs on staples;<sup>xcviii</sup> scale-up distributions of agricultural inputs;<sup>xcix</sup> develop affordable loan packages for farmers and small business holders, and suspend interest and debt payments on existing loans for farmers and agribusinesses in 2020.**

- **G20 governments should resist protectionist measures in exporting and importing food.<sup>c</sup> This includes export taxes, quotas, and bans.<sup>ci</sup> They should take measures to reduce hoarding and panic buying, including limiting purchases by domestic consumers of food items, reducing taxes on food grains, tapping into food reserves, and effectively sharing real-time information on food prices.<sup>cii</sup>**
- **All countries should monitor and act to stabilise food prices. Should prices in global markets rise rapidly, governments should release physical stocks and implement virtual grain reserves through short-selling until prices stabilize.<sup>ciii</sup>**

- <sup>i</sup> World Food Programme, 2020, Risk of hunger pandemic as COVID-19 set to almost double acute hunger by end of 2020, viewed 29 April 2020 <https://insight.wfp.org/covid-19-will-almost-double-people-in-acute-hunger-by-end-of-2020-59df0c4a8072>
- <sup>ii</sup> World Food Programme, 2020, Risk of hunger pandemic as COVID-19 set to almost double acute hunger by end of 2020, viewed 29 April 2020 <https://insight.wfp.org/covid-19-will-almost-double-people-in-acute-hunger-by-end-of-2020-59df0c4a8072>
- <sup>iii</sup> Times Record News, 2020, Banana bread searches increased during lockdown, study of Google searches shows, viewed 26 May 2020, <https://www.timesrecordnews.com/story/news/local/2020/05/21/banana-bread-searches-increased-during-lockdown/5236400002/>.
- <sup>iv</sup> Bloomberg. These Are the Top YouTube Chefs Teaching a New Generation to Cook <https://www.bloomberg.com/news/articles/2020-04-15/best-youtube-cooking-video-babish-pick-up-limes-bon-appetit>, viewed 19 April 2020.
- <sup>v</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>vi</sup> World Bank, Prevalence of undernourishment (% of population) - Sub-Saharan Africa, viewed 13 April 2020, <https://data.worldbank.org/indicator/SN.ITK.DEFC.ZS?locations=ZG>.
- <sup>vii</sup> Sumner, A., Hoy, C. & Ortiz-Juarez, E. (2020) Estimates of the impact of COVID-19 on global poverty. WIDER Working Paper 2020/43. Helsinki: UNU-WIDER.
- <sup>viii</sup> Farm Bureau, 2019, U.S. Food Expenditures at Home and Abroad, viewed 14 April 2020, <https://www.fb.org/market-intel/u.s.-food-expenditures-at-home-and-abroad>.
- <sup>ix</sup> Sanogo, I. and Luma, J.K., 2010. Assessments of the impacts of global economic crises on household food security: innovative approaches, lessons and challenges. *Revolution: From Food Aid to Food Assistance—Activities and Platforms*, pp.259-273.
- <sup>x</sup> International Food Policy Research Institute, 2020, The COVID-19 nutrition crisis: What to expect and how to protect, viewed 25 April 2020, <https://www.ifpri.org/blog/covid-19-nutrition-crisis-what-expect-and-how-protect>.
- <sup>xi</sup> New York Times, 2020, 'We Had to Do Something': Trying to Prevent Massive Food Waste, viewed 14 May 2020, <https://www.nytimes.com/2020/05/02/business/coronavirus-food-waste-destroyed.html?smid=tw-nytimes&smtyp=cur>.
- <sup>xii</sup> World Food Programme, 2020, COVID-19 and the 5 major threats it poses to global food security, viewed 14 April 2020, <https://insight.wfp.org/covid-19-and-the-5-major-threats-it-poses-to-global-food-security-1c4da2ff6657>
- <sup>xiii</sup> The Africa Report, 2020, Coronavirus: no major concern for global food security yet, viewed 15 April 2020, <https://www.theafricareport.com/25062/coronavirus-no-major-concern-for-global-food-security-yet/>
- <sup>xiv</sup> Kelly, J. et al., 2018, Food Insecurity as a Risk Factor for Outcomes Related to Ebola Virus Disease in Kono District, Sierra Leone: A Cross-Sectional Study, *The American Journal of Tropical Medicine and Hygiene*, (viewed 14 April 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5953383/#b11>).
- <sup>xv</sup> Action Against Hunger, 2015, Ebola in Liberia: Impact on Food Security and Livelihoods, viewed 15 April 2020, [https://www.actionagainsthunger.org.uk/sites/default/files/publications/ebola\\_in\\_liberia\\_impact\\_on\\_food\\_security\\_and\\_livelihoods.pdf](https://www.actionagainsthunger.org.uk/sites/default/files/publications/ebola_in_liberia_impact_on_food_security_and_livelihoods.pdf)
- <sup>xvi</sup> Jerving, S., 2019, Q&A: How the Ebola declaration could threaten food security in DRC, Devex, viewed 15 April 2020, <https://www.devex.com/news/q-a-how-the-ebola-declaration-could-threaten-food-security-in-drc-95320>
- <sup>xvii</sup> Food and Agriculture Organization, 2020, COVID-19: Our hungriest, most vulnerable communities face "a crisis within a crisis", viewed 12 April 2020, <http://www.fao.org/news/story/en/item/1269721/icode/>.
- <sup>xviii</sup> World Bank Group, 2015, Reviving Agriculture in Ebola-hit Guinea, Liberia and Sierra Leone, viewed 15 April 2020, <https://www.worldbank.org/en/topic/agriculture/brief/reviving-agriculture-in-ebola-hit-guinea-liberia-and-sierra-leone>
- <sup>xix</sup> IMF, 2020, The Great Lockdown: Worst Economic Downturn Since the Great Depression, viewed 14 April 2020, <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>.
- <sup>xx</sup> International Food Policy Research Institute, 2020, Poverty and food security could grow dramatically as COVID-19 spreads, viewed April 14 2020, <https://www.ifpri.org/blog/poverty-and-food-insecurity-could-grow-dramatically-covid-19-spreads>.
- <sup>xxi</sup> World Bank, 2020, The Impact of COVID-19 on global poverty: Why Sub-Saharan Africa might be the region hardest hit, viewed 29 April 2020 <https://blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest>
- <sup>xxii</sup> UNU-WIDER, 2020, Estimates of the impact of COVID-19 on globale poverty, viewed 29 April 2020 <https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-43.pdf>
- <sup>xxiii</sup> Food and Agriculture Organization, 2018, The State of Food Security and Nutrition in the World, viewed 15 April 2020, <http://www.fao.org/3/I9553EN/I9553en.pdf>.
- <sup>xxiv</sup> International Food Policy Research Institute, 2020, Lockdowns are protecting China's rural families from COVID-19, but the economic burden is heavy, viewed April 14 2020, <https://www.ifpri.org/blog/lockdowns-are-protecting-chinas-rural-families-covid-19-economic-burden-heavy>.
- <sup>xxv</sup> CGD, 2020, Five Findings from a New Phone Survey in Senegal, viewed 29 April 2020 <https://www.cgdev.org/blog/five-findings-new-phone-survey-senegal>
- <sup>xxvi</sup> International Food Policy Research Institute, 2020, Will COVID-19 cause another food crisis? An early review, viewed April 14 2020, <https://www.ifpri.org/blog/will-covid-19-cause-another-food-crisis-early-review>.



- <sup>xxvii</sup> Al Jazeera, 2020, 'We need food': Tunisians struggle under coronavirus lockdown, viewed 15 April 2020, <https://www.aljazeera.com/news/2020/04/food-tunisians-struggle-coronavirus-lockdown-200411142312791.html>.
- <sup>xxviii</sup> Los Angeles Times, 2020, In Zimbabwe, starving people are willing to risk coronavirus to get food, water on the table, viewed April 15 2020, <https://www.latimes.com/world-nation/story/2020-03-30/in-zimbabwe-you-win-coronavirus-or-you-win-starvation>.
- <sup>xxix</sup> United Nations COVID-19 Response, 2020, UN working to avert dual crises as COVID-19 hits hunger hotspots, viewed 15 April 2020, <https://www.un.org/en/un-coronavirus-communications-team/un-working-avert-dual-crises-covid-19-hits-hunger-hotspots>.
- <sup>xxx</sup> World Population Review, 2020, Zimbabwe Population 2020, viewed 16 April 2020, <https://worldpopulationreview.com/countries/zimbabwe-population/>.
- <sup>xxxi</sup> Center for Global Development, March 24, 2020. *With Schools Closed, Hundreds of Millions of Children Are Not Receiving School Meals*, Accessed March 26, 2020, <https://www.cgdev.org/blog/schools-closed-hundreds-millions-children-are-not-receiving-school-meals>.
- <sup>xxxii</sup> UNESCO. *COVID-19 Educational Disruption and Response*. Accessed May 4, 2020, <https://en.unesco.org/themes/education-emergencies/coronavirus-school-closures>.
- <sup>xxxiii</sup> Devex, 2020, WFP repackages efforts to reach hungry children as COVID-19 closes schools, viewed April 16 2020, <https://www.devex.com/news/wfp-repackages-efforts-to-reach-hungry-children-as-covid-19-closes-schools-96878>.
- <sup>xxxiv</sup> World Bank, 2020, World Bank Predicts Sharpest Decline of Remittances in Recent History, viewed 29 April 2020 <https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history>
- <sup>xxxv</sup> ONE, 2020, 4 ways the Nigerian government could minimize the impact of COVID-19, viewed April 15 2020, <https://www.one.org/africa/blog/how-nigeria-minimize-impact-covid-19/>.
- <sup>xxxvi</sup> Quartz, 2020, These are the countries most affected by the falling remittances sparked by the Covid-19 pandemic, viewed April 15 2020, <https://qz.com/1834566/falling-remittances-will-hit-tonga-haiti-and-kyrgyzstan-hardest/>.
- <sup>xxxvii</sup> Money and Banking, 2018, The Stubbornly High Cost of Remittances, viewed 16 April 2020, <https://www.moneyandbanking.com/commentary/2018/2/18/the-stubbornly-high-cost-of-remittances>.
- <sup>xxxviii</sup> World Bank, 2020, Remittances in times of the coronavirus – keep them flowing, viewed April 16 2020, <https://blogs.worldbank.org/psd/remittances-times-coronavirus-keep-them-flowing>.
- <sup>xxxix</sup> International Food Policy Research Institute, 2020, COVID-19: Trade restrictions are worst possible response to safeguard food security, viewed 14 April 2020, <https://www.ifpri.org/blog/covid-19-trade-restrictions-are-worst-possible-response-safeguard-food-security>.
- <sup>xl</sup> International Food Policy Research Institute, 2020, Will COVID-19 cause another food crisis? An early review, viewed April 14 2020, <https://www.ifpri.org/blog/will-covid-19-cause-another-food-crisis-early-review>.
- <sup>xli</sup> Eurasianet, March 30, 2020. Kazakhstan introduces wheat, flour export quotas, viewed 6 April 2020, <https://eurasianet.org/kazakhstan-introduces-wheat-flour-export-quotas>.
- <sup>xlii</sup> European Commission, 2018, Food Reserves: Using food reserves to enhance food and nutrition security in developing countries, viewed 14 April 2020, [http://cseaafrica.org/wp-content/uploads/2018/11/ASiST\\_FoodReserves\\_SynthesisReport\\_EN.pdf](http://cseaafrica.org/wp-content/uploads/2018/11/ASiST_FoodReserves_SynthesisReport_EN.pdf).
- <sup>xliii</sup> Eurasianet, March 30, 2020. Kazakhstan introduces wheat, flour export quotas, viewed 6 April 2020, <https://eurasianet.org/kazakhstan-introduces-wheat-flour-export-quotas>.
- <sup>xliv</sup> International Food Policy Research Institute, 2020, Food Export Restrictions during the Covid-19 crisis, viewed 30 April 2020, <https://public.tableau.com/profile/laborde6680#!/vizhome/ExportRestrictionsTracker/FoodExportRestrictionsTracker>.
- <sup>xlv</sup> Peterson Institute for International Economics, 2020, Ensuring global food security in the time of COVID-19, viewed April 13 2020, <https://www.piie.com/blogs/trade-and-investment-policy-watch/ensuring-global-food-security-time-covid-19>.
- <sup>xlvi</sup> Food and Agriculture Organization, 2020, Daily Food Prices Monitor (from: 14/02/2020 to: 26/05/2020), viewed 26 May 2020, <https://datalab.review.fao.org/dailyprices.html#>.
- <sup>xlvii</sup> World Bank, 2020, Food Security and COVID-19, viewed 16 April 2020, <https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19>.
- <sup>xlviii</sup> Jensen, H.G. and Anderson, K., 2017. *Grain price spikes and beggar-thy-neighbor policy responses: A global economy-wide analysis*. The World Bank Economic Review, 31(1), pp.158-175.
- <sup>xlix</sup> Peterson Institute for International Economics, 2020, Ensuring global food security in the time of COVID-19, viewed April 13 2020, <https://www.piie.com/blogs/trade-and-investment-policy-watch/ensuring-global-food-security-time-covid-19>.
- <sup>l</sup> Peterson Institute for International Economics, 2020, Wrong tools, wrong time: Food export bans in the time of COVID-19, viewed April 14, 2020, <https://www.piie.com/blogs/realtime-economic-issues-watch/wrong-tools-wrong-time-food-export-bans-time-covid-19>.
- <sup>li</sup> Jensen, H.G. and Anderson, K., 2017. *Grain price spikes and beggar-thy-neighbor policy responses: A global economy-wide analysis*. The World Bank Economic Review, 31(1), pp.158-175.
- <sup>lii</sup> Down to Earth, 2017, A grain revolution for Africa, viewed 14 April 2020, <https://www.downtoearth.org.in/news/a-grain-revolution-for-africa-58672>.

- <sup>liii</sup> World Food Programme, 2020, COVID-19: Potential impact on the world's poorest people, viewed 12 April 2020, <https://www.wfp.org/publications/covid-19-potential-impact-worlds-poorest-people>.
- <sup>liiv</sup> Calculated using merchandise trade data from UNCTAD, viewed 15 April 2020 [https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS\\_ChosenLang=en](https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en)
- <sup>liv</sup> Peterson Institute for International Economics, 2020, Exchange rate policy in the COVID-19 pandemic, viewed 13 April 2020, <https://www.piie.com/blogs/realtime-economic-issues-watch/exchange-rate-policy-covid-19-pandemic>.
- <sup>lvi</sup> BBC, 2019, Coronavirus: Oil price collapses to lowest level for 18 years, viewed 15 April 2020 <https://www.bbc.com/news/business-52089127>.
- <sup>lvii</sup> Export.gov, 2019, Exporting to Nigeria - Market Overview, viewed 15 April 2020, <https://www.export.gov/apex/article?id=Nigeria-Market-Overview>.
- <sup>lviii</sup> World Bank, 2019, The World Bank in Angola, viewed 15 April 2020, <https://www.worldbank.org/en/country/angola/overview>.
- <sup>lix</sup> International Monetary Fund, 2020, Policy Responses to COVID-19, viewed April 15 2020, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>.
- <sup>lxx</sup> Calculated using data from Trading Economics, 2020, Angolan Kwanza, viewed April 15 2020, <https://tradingeconomics.com/angola/currency>.
- <sup>lxix</sup> Export.gov, 2019, Angola - Agricultural Products, viewed 15 April 2020, <https://www.export.gov/apex/article?id=Angola-Agricultural-Products>.
- <sup>lxxii</sup> Business Day, 2019, Nigeria, still the largest rice importing country in Africa, viewed April 15 2020, <https://businessday.ng/research-reports/article/nigeria-still-the-largest-rice-importing-country-in-africa/>.
- <sup>lxxiii</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>lxxiv</sup> International Food Policy Institute, 2020, COVID-19 lockdowns are imposing substantial economic costs on countries in Africa, viewed 26 May 2020, <https://www.ifpri.org/blog/covid-19-lockdowns-are-imposing-substantial-economic-costs-countries-africa>.
- <sup>lxxv</sup> AbdulKareem M, How Coronavirus is lockdown is affecting Nigeria's food system, viewed 15 April 2020 <https://www.premiumtimesng.com/news/top-news/387592-how-coronavirus-lockdown-is-affecting-nigerias-food-systems.html>.
- <sup>lxxvi</sup> FAO, 2020, COVID-19: Our hungriest, most vulnerable communities face "a crisis within a crisis", viewed 14 April 2020 <http://www.fao.org/news/story/en/item/1269721/icode/>.
- <sup>lxxvii</sup> Food and Agriculture Organization, 2020, COVID-19: Our hungriest, most vulnerable communities face "a crisis within a crisis", viewed 12 April 2020, <http://www.fao.org/news/story/en/item/1269721/icode/>.
- <sup>lxxviii</sup> Choularton, R. & Mallory, M., 2020, Opinion: How to address the impact of COVID-19 on global food systems, viewed 14 April 2020, <https://www.devex.com/news/sponsored/opinion-how-to-address-the-impact-of-covid-19-on-global-food-systems-96892>
- <sup>lxxix</sup> World Bank Group, 2015, Reviving Agriculture in Ebola-hit Guinea, Liberia and Sierra Leone, viewed 15 April 2020, <https://www.worldbank.org/en/topic/agriculture/brief/reviving-agriculture-in-ebola-hit-guinea-liberia-and-sierra-leone>
- <sup>lxxx</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>lxxxi</sup> Nwuneli N., 2020, Ensuring that hunger does not kill more people than COVID-19 in Africa, Businessday Nigeria, viewed 14 April 2020 <https://businessday.ng/features/article/ensuring-that-hunger-does-not-kill-more-people-than-covid-19-in-africa/>.
- <sup>lxxxii</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>lxxxiii</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>lxxxiv</sup> Premium Times, 2020, Coronavirus: Nigerian govt to release 70,000 metric tons of grains to masses — SGF Mustapha, viewed 15 April 2020 <https://www.premiumtimesng.com/news/headlines/386496-coronavirus-nigerian-govt-to-release-70000-metric-tons-of-grains-to-masses-sgf-mustapha.html>.
- <sup>lxxxv</sup> New York Times, 2020, Some Countries Face an Awful Question: Death by Coronavirus or by Hunger?, viewed April 14 2020, <https://www.nytimes.com/2020/04/12/opinion/coronavirus-poverty.html>.
- <sup>lxxxvi</sup> Center for Global Development, 2020, The Economic Impact of COVID-19 in Africa: A Round-Up of This Week's Analysis, viewed 16 April 2020, <https://www.cgdev.org/blog/economic-impact-covid-19-africa-weeks-latest-analysis>
- <sup>lxxxvii</sup> The Guardian, 2020, US unemployment applications reach over 26m as stats struggle to keep up, viewed 29 April 2020 <https://www.theguardian.com/business/2020/apr/23/us-unemployment-claims-benefits-coronavirus>
- <sup>lxxxviii</sup> New York Times, 2020, Some Countries Face an Awful Question: Death by Coronavirus or by Hunger?, viewed April 14 2020, <https://www.nytimes.com/2020/04/12/opinion/coronavirus-poverty.html>.

- <sup>lxxix</sup> International Labour Organization, 2018, More than 60 per cent of the world's employed population are in the informal economy, viewed 14 April 2020, [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_627189/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_627189/lang-en/index.htm).
- <sup>lxxx</sup> New York Times, 2020, Some Countries Face an Awful Question: Death by Coronavirus or by Hunger?, viewed April 14 2020, <https://www.nytimes.com/2020/04/12/opinion/coronavirus-poverty.html>.
- <sup>lxxxi</sup> Galtier F., 2019, Can the ECOWAS Regional Reserve Project improve the management of food crises in West Africa?, viewed 15 April 2020 <https://europa.eu/capacity4dev/file/90219/download?token=eGmhRmUZ>.
- <sup>lxxxii</sup> Onyekwena C., 2020, Efficiency of Food Reserves in Enhancing Food Security in Developing Countries: The Nigerian Experience, viewed 15 April 2020 <https://www.africaportal.org/documents/19179/Food-Reserves-Working-Paper-No7.pdf>.
- <sup>lxxxiii</sup> ONE's calculation using grains data (market and trade) from the United States Department of Agriculture, viewed 15 April 2020 <https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads>
- <sup>lxxxiv</sup> World Food Programme, 2020, Risk of hunger pandemic as COVID-19 set to almost double acute hunger by end of 2020, viewed 29 April 2020 <https://insight.wfp.org/covid-19-will-almost-double-people-in-acute-hunger-by-end-of-2020-59df0c4a8072>
- <sup>lxxxv</sup> Our World in Data, Hunger and Undernourishment, viewed April 15 2020, <https://ourworldindata.org/hunger-and-undernourishment#all-charts-preview>.
- <sup>lxxxvi</sup> World Bank, 2020, Africa's Pulse: An Analysis of Issues Affecting Africa's Economic Future, Vol. 21, viewed 12 April 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/33541/9781464815683.pdf?sequence=9>.
- <sup>lxxxvii</sup> World Food Programme, 2020, Risk of hunger pandemic as COVID-19 set to almost double acute hunger by end of 2020, viewed 29 April 2020 <https://insight.wfp.org/covid-19-will-almost-double-people-in-acute-hunger-by-end-of-2020-59df0c4a8072>
- <sup>lxxxviii</sup> World Food Programme, 2020, COVID-19: Potential impact on the world's poorest people, viewed 12 April 2020, <https://www.wfp.org/publications/covid-19-potential-impact-worlds-poorest-people>.
- <sup>lxxxix</sup> World Food Programme, 2020, COVID-19: Potential impact on the world's poorest people, viewed 12 April 2020, <https://www.wfp.org/publications/covid-19-potential-impact-worlds-poorest-people>.
- <sup>xc</sup> Devex, 2020, WFP repackages efforts to reach hungry children as COVID-19 closes schools, viewed April 16 2020, <https://www.devex.com/news/wfp-repackages-efforts-to-reach-hungry-children-as-covid-19-closes-schools-96878>.
- <sup>xcii</sup> United Nations COVID-19 Response, 2020, "This is, above all, a human crisis that calls for solidarity", viewed 16 April 2020, <https://www.un.org/en/un-coronavirus-communications-team/above-all-human-crisis-calls-solidarity>.
- <sup>xciii</sup> United Nations, 2020, Global Humanitarian Response Plan COVID-19, viewed 4 April 2020, <https://www.unocha.org/sites/unocha/files/Global-Humanitarian-Response-Plan-COVID-19.pdf>
- <sup>xciv</sup> The Global Agriculture and Food Security Program, 2019, About Us, viewed 16 April 2020, <https://www.gafspfund.org/about>
- <sup>xcv</sup> The Global Agriculture and Food Security Program, 2019, Investment Case, viewed 16 April 2020, [https://www.gafspfund.org/sites/default/files/2019-10/GAFSP%20-%20Investment%20Case%202019\\_FINAL%20web.pdf](https://www.gafspfund.org/sites/default/files/2019-10/GAFSP%20-%20Investment%20Case%202019_FINAL%20web.pdf)
- <sup>xcvi</sup> Chadwick, V., 2019, Global agriculture fund GAFSP embarks on new replenishment model, Devex, viewed 16 April 2020, <https://www.devex.com/news/global-agriculture-fund-gafsp-embarks-on-new-replenishment-model-95986>
- <sup>xcvii</sup> Food and Agriculture Organization, 2020, COVID-19 and the Risks to Food Supply Chains, viewed April 25 2020, [http://www.fao.org/fileadmin/user\\_upload/ric/docs/covid19/statement\\_ministers\\_of\\_agriculture\\_25\\_countries.pdf](http://www.fao.org/fileadmin/user_upload/ric/docs/covid19/statement_ministers_of_agriculture_25_countries.pdf).
- <sup>xcviii</sup> Foreign Policy, 2020, How to Stop a Looming Food Crisis, viewed 16 April 2020, <https://foreignpolicy.com/2020/04/14/how-to-stop-food-crisis-coronavirus-economy-trade/>.
- <sup>xcix</sup> Foreign Policy, 2020, How to Stop a Looming Food Crisis, viewed 16 April 2020, <https://foreignpolicy.com/2020/04/14/how-to-stop-food-crisis-coronavirus-economy-trade/>.
- <sup>c</sup> FAO, 2020, Addressing the impacts of COVID-19 in food crises April–December 2020, viewed 15 April 2020 <http://www.fao.org/3/ca8497en/ca8497en.pdf>
- <sup>ci</sup> Peterson Institute for International Economics, 2020, Ensuring global food security in the time of COVID-19, viewed April 13 2020, <https://www.piie.com/blogs/trade-and-investment-policy-watch/ensuring-global-food-security-time-covid-19>.
- <sup>cii</sup> Foreign Policy, 2020, How to Stop a Looming Food Crisis, viewed 16 April 2020, <https://foreignpolicy.com/2020/04/14/how-to-stop-food-crisis-coronavirus-economy-trade/>.
- <sup>ciii</sup> Peterson Institute for International Economics, 2020, Ensuring global food security in the time of COVID-19, viewed April 13 2020, <https://www.piie.com/blogs/trade-and-investment-policy-watch/ensuring-global-food-security-time-covid-19>.
- <sup>civ</sup> Peterson Institute for International Economics, 2020, Ensuring global food security in the time of COVID-19, viewed April 13 2020, <https://www.piie.com/blogs/trade-and-investment-policy-watch/ensuring-global-food-security-time-covid-19>.